



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/826,294

04/19/2004

Naoko Ito

8046-1017-1

1316

466 7590 07/05/2007
YOUNG & THOMPSON
745 SOUTH 23RD STREET
2ND FLOOR
ARLINGTON, VA 22202

EXAMINER

GORTAYO, DANGELINO N

ART UNIT

PAPER NUMBER

2168

MAIL DATE

DELIVERY MODE

07/05/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Response to Amendment

1. In the amendment filed on 4/12/2007, claims 17-19, 47, 61 have been amended.
The currently pending claims considered below are Claims 17-30, 47-59 and 61.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 17-30, 47-59, and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bodnar et al. (US Patent 6,295,541 B1) in view of Benson et al. (US Patent 6,202,085 B1) in view of Burkett et al. (US Patent 6,635,089 B1).

As per claim 17, Bodnar teaches "A structured document processing system"
(see Abstract)

"comprising: a network composed of a server device and a plurality of client devices," (Figure 2 and column 10 lines 23-63, wherein clients are shown in communication with a synchronizer in a main PC) "the server device storing a structured document composed of a plurality of elements" (Figure 2 reference 32, 37, and column

Art Unit: 2168

11 lines 26-49, wherein a Synchronizer dataset stores the most up-to-date data for a document) “each of the elements being a constituent unit of the structured document,” (Figure 5C and column 20 lines 24-38, wherein each element of a document is mapped and tracked by the Synchronizer)

“the server device comprising an update manager for managing an update of the structured document using an updated minimum element of the structured document, the updated minimum element including an updated portion of the structured document,” (Figures 5B, 5C and column 19 line 55 – column 20 line 21, wherein a record file is mapped individually) “the server device including a transmission section that transmits the updated minimum element to one of the client devices.” (Figure 3A reference 309, column 10 lines 29-48, and column 12 lines 30-41)

Bodnar does not teach “each of the client devices storing a duplication of the structured document”. Benson teaches “each of the client devices storing a duplication of the structured document” (column 13 lines 31-56, wherein a local copy of a document is stored by a data replication system). It would have been obvious at the time of the invention for one of ordinary skill in the art to combine Bodnar’s system to synchronize data between a synchronizer server and clients with Benson’s method of synchronizing exact copies of data from sources to synchronizing clients. This would give the user the advantage of improving access time and performance by being more exact with the changes to the document, speeding up synchronization. The motivation for doing so

would be to provide a generalized synchronization model. (Benson, column 3 lines 39-48)

Neither Bodnar or Benson explicitly teaches a plurality of elements which are hierarchically organized in a tree structure. Burkett, however, teaches a plurality of elements which are hierarchically organized in a tree structure (column 1 lines 36-58, column 4 lines 21-50, column 16 lines 9-29, column 18 lines 18-33, wherein documents organized in a tree structure are updated in clients). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate a tree structure for a plurality of elements with a system to synchronize data between a synchronizer server and clients using exact copies. This gives the user the advantage of update and control specific contents of a document with a tree structure. The motivation for doing so would be to dynamically process and update data in XML content (Burkett, column 3 lines 35-56).

As per claim 18, Bodnar teaches “the update manager instructs the transmission section to transmit the updated minimum element of the structured document when the structured document has been updated. (Figure 9A reference 910 and column 11-37, wherein client accessors provide communication with clients and are directed by a synchronizer core to transmit data at updating).

As per claim 19, Bodnar teaches “the update manager instructs the transmission section to transmit update information to one of the client devices when

Art Unit: 2168

the structured document has been updated, the update information including identification information identifying the updated minimum element of the structured document" (Figure 9A reference 910, Figure 10A reference 1002, and column 11-37, wherein client accessors provide communication with clients and are directed by a synchronizer core to transmit data at updating as identified by records).

As per claim 20, Bodnar teaches "the update manager manages the update of the structured document using an update time at which the update of the structured document occurs, wherein, when an update occurs at the node, the update manager instructing the transmission section to transmit update information to a client device, the update information including the update time." (Figure 10B, 10C, and column 41 lines 33-56)

As per claim 21, Bodnar teaches "when a client device receives the update information from the server device, the client device updates the structured document stored therein based on the update information received. " (column 42 lines 41-58)

As per claim 22, Bodnar teaches "each of the client devices comprises: a comparator for comparing the update time of the update information received is later than an updated time of the structured document currently stored therein;" (Figure 7C and column 25 lines 12-35)

"and a transmission controller for requesting transfer of an updated minimum element of the structured document when the update time of the update information received is later than the updated time of the structured document currently stored therein." (column 42 lines 42-55)

As per claim 23, Bodnar teaches “the update manager transmits an updated minimum element of the structured document to a client device at a plurality of predetermined times.” (Figure 10C reference 1019 and column 40 lines 45-53)

As per claim 24, Bodnar teaches “the update manager transmits update information to the client device at a plurality of predetermined times, the update information including identification information identifying an updated minimum element of the structured document.” (Figure 10C, column 40 lines 13-53)

As per claim 25, Bodnar teaches “the update manager manages the update of the structured document using an update time at which the update of the structured document occurs, the update information further includes the update time.” (Figure 10B, column 39 lines 46-67)

As per claim 26, Benson teaches “a gateway server device performing protocol processing between the server device and each of the client devices,” (Figure 2 reference 34 and column 10 lines 35-53)

“wherein the server device transmits update information indicating that the structured document is updated to the gateway server device,” (column 11 lines 5-18)

“wherein the gateway server device comprises: an structured document manager for managing the duplication of the structured document stored in the client device,” (Figure 2 reference 34 and column 13 line 57 – column 15 line 11)

“an update information receiver for receiving update information from the server device,” (column 14 lines 13-36)

Art Unit: 2168

“and an update controller for transmitting the update information received from the server device to the client device.” (column 15 lines 1-11)

As per claim 27, Bodnar teaches “the update controller transmits the update information received from the server device to the client device at a plurality of predetermined times.” (Figure 10C, column 40 lines 13-53)

As per claim 28, Benson teaches “when a client device receives the update information from the gateway server device, the client device updates the duplication of the structured document stored therein based on the update information received.” (column 11 lines 5-18)

As per claim 29, Bodnar teaches “each of the client devices comprises: a comparator for comparing the update time of the update information received is later than an updated time of the structured document currently stored therein;” (Figure 7C and column 25 lines 12-35)

“and a transmission controller for requesting transfer of an updated minimum element of the structured document when the update time of the update information received is later than the updated time of the structured document currently stored therein.” (column 42 lines 42-55)

As per claim 30, Benson teaches “a gateway server device performing protocol processing between the server device and each of the client devices,” (Figure 2 reference 34 and column 10 lines 35-53)

“wherein the server device transmits update information including an update time and the updated minimum element to the gateway server device,” (column 13 lines 57-65)

“wherein the gateway server device comprises: an structured document storage for storing the duplication of the structured document stored in the client device;” (Figure 2 reference 68 and column 12 lines 52-67)

“an structured document manager for managing the duplication of the structured document for the client device and an update time thereof;” (Figure 2 reference 34 and column 13 line 57 – column 15 line 11)

“an update information receiver for receiving the update information from the server device; and an update controller for transmitting the updated minimum element of the structured document to a client device having the update time of the structured document stored therein, which is later than the update time included in the update information received from the server device.” (column 14 lines 13-36)

As per claim 47, Bodnar teaches “A structured document updating method” (see Abstract) “in a network composed of a server device and a plurality of client devices,” (Figure 2 and column 10 lines 23-63, wherein clients are shown in communication with a synchronizer in a main PC)

the server device storing a structured document composed of a plurality of elements (Figure 2 reference 32, 37, and column 11 lines 26-49, wherein a Synchronizer dataset stores the most up-to-date data for a document) “each of the

elements being a constituent unit of the structured document,” (Figure 5C and column 20 lines 24-38, wherein each element of a document is mapped and tracked by the Synchronizer)

the method comprising the steps of: at the server device, a) managing an update of the structured document using an updated minimum element of the structured document, the updated minimum element including an updated portion of the structured document; (Figures 5B, 5C and column 19 line 55 – column 20 line 21, wherein a record file is mapped individually)

“and b) notifying the client devices on the network that the structured document is updated when a part of the structured document has been changed.” (column 37 line 54 – column 38 line 14, wherein synchronization support module notifies client of updated data)

Bodnar does not disclose “each of the client devices storing a duplication of the structured document”. Benson teaches “each of the client devices storing a duplication of the structured document,” (column 13 lines 31-56, wherein a local copy of a document is stored by a data replication system). It would have been obvious at the time of the invention for one of ordinary skill in the art to combine Bodnar’s system to synchronize data between a synchronizer server and clients with Benson’s method of synchronizing exact copies of data from sources to synchronizing clients. This would give the user the advantage of improving access time and performance by being more exact with the changes to the document, speeding up synchronization. The motivation

Art Unit: 2168

for doing so would be to provide a generalized synchronization model. (column 3 lines 39-48)

Neither Bodnar or Benson explicitly teaches a plurality of elements which are hierarchically organized in a tree structure. Burkett, however, teaches a plurality of elements which are hierarchically organized in a tree structure (column 1 lines 36-58, column 4 lines 21-50, column 16 lines 9-29, column 18 lines 18-33, wherein documents organized in a tree structure are updated in clients). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate a tree structure for a plurality of elements with a system to synchronize data between a synchronizer server and clients using exact copies. This gives the user the advantage of update and control specific contents of a document with a tree structure. The motivation for doing so would be to dynamically process and update data in XML content (Burkett, column 3 lines 35-56).

As per claim 48, Bodnar teaches “at a client device receiving an updated minimum element of the structured document from the server device, c) updating a corresponding minimum element of the structured document stored therein using the updated minimum element received.” (Figure 9A reference 910 and column 11-37, wherein client accessors provide communication with clients and are directed by a synchronizer core to transmit data at updating).

As per claim 49, Bodnar teaches “in the step (a), the update of the information is managed using an update time at which the update of the information occurs, wherein the step (b) comprises the step of: transmitting update information to the client devices, the update information including the update time.” (Figure 10B, 10C, and column 41 lines 33-56)

As per claim 50, Bodnar teaches “at a client device receiving the update information from the server device, c) updating the information stored therein based on the update information received.” (column 42 lines 41-58)

As per claim 51, Bodnar teaches “the step (c) comprises the steps of: determining whether the update time of the update information received is later than an updated time of the structured document currently stored therein;” (Figure 7C and column 25 lines 12-35)

“and when the update time of the update information received is later than an updated time of the structured document currently stored therein, requesting transfer of an updated minimum element of the structured document.” (column 42 lines 42-55)

As per claim 52, Bodnar teaches “an updated minimum unit of the structured document is transmitted to the client devices at a plurality of predetermined times.” (Figure 10C reference 1019 and column 40 lines 45-53)

As per claim 53, Bodnar teaches “update information is transmitted to the client devices at a plurality of predetermined times, the update information including identification information identifying an updated minimum unit of the structured document.” (Figure 10C, column 40 lines 13-53)

As per claim 54, Bodnar teaches “the update of the information is managed using an update time at which the update of the structured document occurs, the update information further includes the update time.” (Figure 10B, column 39 lines 46-67)

As per claim 55, Benson teaches “the network further comprises a gateway server device performing protocol processing between the server device and each of the client devices,” (Figure 2 reference 34 and column 10 lines 35-53)

“the method further comprising the steps of: at the gateway server device, c) managing the structured document stored in each of the client devices;” (Figure 2 reference 34 and column 13 line 57 – column 15 line 11)

“d) receiving an update information from the server device;” (column 11 lines 5-18)

“and e) transmitting the update information received from the server device to a client device.” (column 15 lines 1-11)

As per claim 56, Bodnar teaches “in the step (e), the update information received from the server device is transmitted to the client device at a plurality of predetermined times.” (Figure 10C, column 40 lines 13-53)

As per claim 57, Benson teaches “at the client device receiving the update information from the gateway server device, updating the structured document stored therein based on the update information received.” (column 11 lines 5-18)

As per claim 58, Bodnar teaches “at the client device, determining whether the update time of the update information received is later than an updated time of the structured document currently stored therein;” (Figure 7C and column 25 lines 12-35)

“and when the update time of the update information received is later than an updated time of the structured document currently stored therein, using the identification information to request transfer of an updated minimum unit of the structured document from the gateway server device.” (column 42 lines 42-55)

As per claim 59, Benson teaches “the network further comprises a gateway server device performing protocol processing between the server device and each of the client devices,” (Figure 2 reference 34 and column 10 lines 35-53)

“the method further comprising the steps of: at the gateway server device, storing the structured document stored in each of the client devices in an information storage,” (Figure 2 reference 68 and column 12 lines 52-67)

“managing the structured document for each of the client devices and an update time thereof,” (Figure 2 reference 34 and column 13 line 57 – column 15 line 11)

“receiving an update information from the server device at which an update of the structured document occurs,” (column 14 lines 13-36)

“selecting a client device having the update time of the structured document stored therein, which is later than the update time included in the update information received from the server device,” (column 13 line 57 – column 15 line 11)

“and transmitting the updated minimum unit of the structured document identified by the identification information included in the update information received from the server device, to the selected client device.” (column 14 lines 13-36)

As per claim 61, Bodnar teaches “A storage medium storing a computer program for updating a structured document in a network” (see Abstract) “composed of a server device and a plurality of client devices,” (Figure 2 and column 10 lines 23-63, wherein clients are shown in communication with a synchronizer in a main PC) the server device storing a structured document composed of a plurality of elements (Figure 2 reference 32, 37, and column 11 lines 26-49, wherein a Synchronizer dataset stores the most up-to-date data for a document) “each of the elements being a constituent unit of the structured document,” (Figure 5C and column 20 lines 24-38, wherein each element of a document is mapped and tracked by the Synchronizer)

the computer program at the server device comprising the steps of: a) managing an update of the structured document using an updated minimum element of the structured document, the updated minimum element including an updated portion of the structured document; (Figures 5B, 5C and column 19 line 55 – column 20 line 21, wherein a record file is mapped individually)

“and b) notifying the client devices on the network that the structured document is updated when a part of the structured document has been changed.” (column 37 line 54 – column 38 line 14, wherein synchronization support module notifies client of updated data)

Bodnar does not teach “each of the client devices storing a duplication of the structured document”. Benson teaches “each of the client devices storing a duplication of the structured document” (column 13 lines 31-56, wherein a local copy of a document

is stored by a data replication system). It would have been obvious at the time of the invention for one of ordinary skill in the art to combine Bodnar's system to synchronize data between a synchronizer server and clients with Benson's method of synchronizing exact copies of data from sources to synchronizing clients. This would give the user the advantage of improving access time and performance by being more exact with the changes to the document, speeding up synchronization. The motivation for doing so would be to provide a generalized synchronization model. (column 3 lines 39-48).

Neither Bodnar or Benson explicitly teaches a plurality of elements which are hierarchically organized in a tree structure. Burkett, however, teaches a plurality of elements which are hierarchically organized in a tree structure (column 1 lines 36-58, column 4 lines 21-50, column 16 lines 9-29, column 18 lines 18-33, wherein documents organized in a tree structure are updated in clients). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate a tree structure for a plurality of elements with a system to synchronize data between a synchronizer server and clients using exact copies. This gives the user the advantage of update and control specific contents of a document with a tree structure. The motivation for doing so would be to dynamically process and update data in XML content (Burkett, column 3 lines 35-56).

Response to Arguments

4. Applicant's arguments, see page 13, filed 4/12/2007, with respect to the rejection of claim 17 under 35 USC 101 have been fully considered and are persuasive. The rejection of claim 17 in regards to 35 USC 101 has been withdrawn.

5. Applicant's arguments with respect to the rejection for claim 17-30, 47-59, and 61 under 35 USC 103(a) have been considered but are moot in view of the new ground(s) of rejection. The amendments to the independent claims necessitated new grounds of rejection.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dangelino N. Gortayo whose telephone number is (571)272-7204. The examiner can normally be reached on M-F 7:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim T. Vo can be reached on (571)272-3642. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dangelino N. Gortayo
Examiner



Tim T. Vo
SPE



TIM VO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100